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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604378N / <i>Nav Integrated Fire Control - Counter Air Sys E</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	342.599	49.110	45.892	66.445	-	66.445	70.326	73.698	77.488	71.958	Continuing	Continuing
2757: <i>All Domain Long Range Naval Integrated Fire Control (LR-NIFC)</i>	0.000	0.000	0.000	25.000	-	25.000	25.500	26.010	26.350	27.061	Continuing	Continuing
3159: <i>Naval Integrated Fire Control-Counter Air SE&I</i>	328.046	34.240	36.181	29.820	-	29.820	32.170	34.851	37.858	31.422	Continuing	Continuing
3242: <i>NIFC-CA Supported by Airborne Platforms</i>	14.553	8.595	9.711	11.625	-	11.625	12.656	12.837	13.280	13.475	Continuing	Continuing
9999: <i>Congressional Adds</i>	0.000	6.275	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.275

A. Mission Description and Budget Item Justification

PU 2757 All domain Long Range Networked Fires (LRNF) is a cross organizational Systems Engineering, Integration and Test (SEIT) project to coordinate and align the acquisition enterprise for the delivery of effective and interoperable long range kill chains. This effort will coordinate development and validation of all kill chain components across key enabler programs that include sensors, networks, transport architectures, radios, weapons, platforms, and combat systems across warfighting domains. The project will include joint architecture and Battle Management Command and Control (BMC2) development and maturation, including integration of the key enabler programs to optimize current and emerging capabilities across Navy and other mission partners. Development and execution of the LRNF integrated System of Systems (SoS) acquisition approach will prioritize nearer term fielding of effective capabilities, while continuing to mature solutions and informing investments across the portfolio.

3159 Naval Integrated Fire Control (NIFC) SEI&T project is a systems engineering effort to extend the Naval Integrated Air and Missile Defense battlespace out to the maximum kinematic range of our weapons for the air, surface, and strike warfare missions. This includes targets beyond the detection range of the shooter. The NIFC project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates them together, and performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize future defense capabilities. As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From The Sea (FTS) family of kill chains which includes an elevated sensor, platform, fire control system, and missile, along with introducing other networks and sensors coordinating with other DOD activities as appropriate. Along with executing NIFC Inc 2 developmental test & fielding the SEIT supports the design of the current kill chain and system configuration and architectures. Future NIFC efforts (e.g. NIFC Inc 3) includes SEIT activities across a broad range of systems and architectures.

3242 Naval Integrated Fire Control (NIFC) From the Air (FTA) SEI&T project is a systems engineering effort to integrate NIFC FTA capabilities within "Pillar Programs" (F/A-18 & EA-18G, E-2D, F-35, Link-16 and Tactical Targeting Network Technology Data Links, and all USN air launched Air-to-Air and Air-to-Surface weapons). Based on the advancing threat, there remains an imperative to improve lethality, survivability and interoperability by extending the battlespace out to the

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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604378N / <i>Nav Integrated Fire Control - Counter Air Sys E</i>
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maximum kinematic range of our weapons for the air, surface, and strike warfare missions. The NIFC FTA project leverages capabilities inherent in existing systems, optimizes current and emerging technologies in platform system upgrades, and integrates them together to form interoperable System of Systems (SoS) to maximize offensive and defensive FTA integrated capabilities. As directed from OPNAV, the project is focused on development of Air Warfare, Surface Warfare, and Strike Warfare FTA effects chains. This PU will support efforts that include decomposing SoS requirements into Mission Technical Baselines (MTBs) and Integrated Capability Technical Baselines (ICTBs) for requirement allocation to Pillar Programs. Additionally, this PU will support NIFC pillar program coordination to provide performance predictions, performance assessments, and SoS risk reduction activities through Live, Virtual, and Constructive (LVC) events, SoS exercises, and development of Requirements Test and Verification Matrices (RTVMs) to support Developmental and Operational Test for the individual platforms. In lieu of a traditional Test and Evaluation Master Plan (TEMP), NIFC FTA test strategies will be developed to identify resources required to evaluate NIFC FTA capabilities, and describe how NIFC FTA capabilities will be evaluated prior to fleet delivery.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	50.233	45.892	51.770	-	51.770
Current President's Budget	49.110	45.892	66.445	-	66.445
Total Adjustments	-1.123	0.000	14.675	-	14.675
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.123	0.000			
• Program Adjustments	0.000	0.000	14.458	-	14.458
• Rate/Misc Adjustments	0.000	0.000	0.217	-	0.217

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: *Congressional Adds*

Congressional Add: *Stratospheric balloons*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

	FY 2022	FY 2023
	6.275	0.000
	6.275	0.000
	6.275	0.000

Change Summary Explanation

FY24: Increase is offset for establishing newly created R&D Project #2757- Long Range Naval Integrated Control (LR-NIFC).

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E				Project (Number/Name) 2757 / All Domain Long Range Naval Integrated Fire Control (LR-NIFC)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2757: All Domain Long Range Naval Integrated Fire Control (LR-NIFC)	0.000	0.000	0.000	25.000	-	25.000	25.500	26.010	26.350	27.061	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

All domain Long Range Networked Fires (LRNF) is a cross organizational Systems Engineering, Integration and Test (SEIT) project to coordinate and align the acquisition enterprise for the delivery of effective and interoperable long range kill chains. This effort will coordinate development and validation of all kill chain components across key enabler programs that include sensors, networks, transport architectures, radios, weapons, platforms, and combat systems across warfighting domains. The project will include joint architecture and Battle Management Command and Control (BMC2) development and maturation, including integration of the key enabler programs to optimize current and emerging capabilities across Navy and other mission partners. Development and execution of the LRNF integrated System of Systems (SoS) acquisition approach will prioritize nearer term fielding of effective capabilities, while continuing to mature solutions and informing investments across the portfolio.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Development, Integration, and fielding of effective all domain Long Range Networked Fires.	0.000	0.000	25.000	0.000	25.000
Articles:	-	-	-	-	-
Description: All domain Long Range Networked Fires (LRNF) is a cross organizational Systems Engineering, Integration and Test (SEIT) project to coordinate and align the acquisition enterprise for the delivery of effective and interoperable long range kill chains. This effort will coordinate development and validation of all kill chain components across key enabler programs that include sensors, networks, transport architectures, radios, weapons, platforms, and combat systems across warfighting domains. The project will include joint architecture and Battle Management Command and Control (BMC2) development and maturation, including integration of the key enabler programs to optimize current and emerging capabilities across Navy and other mission partners. Development and execution of the LRNF integrated System of Systems (SoS) acquisition approach will prioritize nearer term fielding of effective capabilities, while continuing to mature solutions and informing investments across the portfolio.					
FY 2023 Plans: NA					
FY 2024 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 2757 / All Domain Long Range Naval Integrated Fire Control (LR-NIFC)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Development of required digital architectures and key enablers aligned with ongoing programs. Activities will include the utilization of mission thread teams to evaluate capabilities, gaps, development of validation and test plans, systems engineering activities, and identification of critical investment opportunities. Begin Battle Management Command and Control (BMC2) software development and establishment of Operational Center for LRNF, including execution of Systems Requirement Review (SRR). Additionally, will refine and develop necessary Concept of Employment (CONEMP), in coordination with Warfare Development Centers (WDCs) and OPNAV, to achieve required military effect. Will execute systems engineering and integration efforts across enabler capabilities to deliver interoperable kill chains.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in FY 2024 is for the execution of tasking within Long Range Networked Fires (LRNF) for development and maturation of Battle Management Command and Control (BMC2) software and establishment of operational center for LRNF. Increase also includes additional systems engineering, integration, and test development across all key LRNF enablers.</p>					
Accomplishments/Planned Programs Subtotals	0.000	0.000	25.000	0.000	25.000

<p>C. Other Program Funding Summary (\$ in Millions) N/A</p> <p>Remarks</p> <p>D. Acquisition Strategy Not Applicable</p>
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 2757 / All Domain Long Range Naval Integrated Fire Control (LR-NIFC)
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	C/CPFF	JHU/APL : Laurel, MD	0.000	0.000		0.000		1.823	Oct 2023	-		1.823	Continuing	Continuing	Continuing
System Engineering	WR	NSWC Dahlgren : Dahlgren, VA	0.000	0.000		0.000		1.225	Oct 2023	-		1.225	Continuing	Continuing	Continuing
System Engineering	WR	NAWC AD : Pax River, MD	0.000	0.000		0.000		1.487	Oct 2023	-		1.487	Continuing	Continuing	Continuing
System Engineering	Various	Various : Various	0.000	0.000		0.000		1.325	Oct 2023	-		1.325	Continuing	Continuing	Continuing
System Engineering	WR	NAWC WD : China Lake, CA	0.000	0.000		0.000		1.967	Oct 2023	-		1.967	Continuing	Continuing	Continuing
System Engineering	WR	NAVWAR : San Diego, CA	0.000	0.000		0.000		0.325	Oct 2023	-		0.325	Continuing	Continuing	Continuing
System Engineering	WR	NAVSEA : Washington, DC	0.000	0.000		0.000		0.924	Oct 2023	-		0.924	Continuing	Continuing	Continuing
System Engineering	WR	NIWC : San Diego, CA	0.000	0.000		0.000		1.825	Oct 2023	-		1.825	Continuing	Continuing	Continuing
System Engineering	C/CPFF	NSMA : Various	0.000	0.000		0.000		7.775	Oct 2023	-		7.775	Continuing	Continuing	Continuing
System Engineering	WR	NUWC : Newport, RI	0.000	0.000		0.000		0.325	Oct 2023	-		0.325	Continuing	Continuing	Continuing
System Engineering	C/CPFF	MIT LL : Lexington, MA	0.000	0.000		0.000		0.325	Oct 2023	-		0.325	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		19.326		-		19.326	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	C/CPFF	COTF : Norfolk, VA	0.000	0.000		0.000		0.139	Oct 2023	-		0.139	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NIWC : San Diego, CA	0.000	0.000		0.000		1.550	Oct 2023	-		1.550	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NAWCAD : Pax River, MD	0.000	0.000		0.000		0.925	Oct 2023	-		0.925	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 5				PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E				2757 / All Domain Long Range Naval Integrated Fire Control (LR-NIFC)							
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		1.835	Oct 2023	-		1.835	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		4.449		-		4.449	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Planning and Support	WR	NAWCAD : Pax River, MD	0.000	0.000		0.000		0.525	Oct 2023	-		0.525	Continuing	Continuing	Continuing
Project Planning and Support	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		0.250	Oct 2023	-		0.250	Continuing	Continuing	Continuing
Project Planning and Support	WR	NAVSEA : Washington, DC	0.000	0.000		0.000		0.225	Oct 2023	-		0.225	Continuing	Continuing	Continuing
Project Planning and Support	WR	NAVWAR : San Diego, CA	0.000	0.000		0.000		0.225	Oct 2023	-		0.225	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		1.225		-		1.225	Continuing	Continuing	N/A
Project Cost Totals			0.000	0.000		0.000		25.000		-		25.000	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 2757 / All Domain Long Range Naval Integrated Fire Control (LR-NIFC)

LRNF Planning Schedule								
	FY22	FY23	FY24	FY25	FY26	FY27	FY28	
Capability Fielding								
Mission Threads SEIT - CONEMP - Digital Architectures - Integration Requirements - Sensor Evaluation - ICDs - Test planning		EOC(s)	[Bar spanning FY24 to FY25]					
		FOC(s)		[Bar spanning FY25 to FY26]				
BMC2 / Op Center Development - IOC - FOC			[Bar spanning FY24 to FY26] Transition from LRNF					
LRNF - Kill chain Integration - Integration Events			[Bar spanning FY24 to FY28] Sensors, Networks, Radios, Weapon&ombat Systems, Platforms, transport architectures					
			1	2	3	4	5	
						6	7	
	BMC2 - Battle Management Command and Control IOC - Initial Operational Capability		ICD - Interface Control Document FOC - Final Operational Capability		SEIT - Systems Engineering, Integration and Test CONEMP - Concept of Employment			

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 2757 / All Domain Long Range Naval Integrated Fire Control (LR-NIFC)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2757				
Mission Threads SEIT: EOC Mission Thread SEIT	1	2024	1	2026
Mission Threads SEIT: FOC Mission Thread SEIT	1	2025	1	2027
BMC2/Op Center Development: IOC	1	2024	1	2026
BMC2/Op Center Development: FOC	3	2025	4	2028
LRNF: Kill Chain Integration	1	2024	4	2028
LRNF: LRNF Integration Event 1	3	2024	4	2024
LRNF: LRNF Integration Event 2	2	2025	3	2025
LRNF: LRNF Integration Event 3	1	2026	2	2026
LRNF: LRNF Integration Event 4	4	2026	1	2027
LRNF: LRNF Integration Event 5	3	2027	4	2027
LRNF: LRNF Integration Event 6	1	2028	2	2028
LRNF: LRNF Integration Event 7	3	2028	4	2028

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E				Project (Number/Name) 3159 / Naval Integrated Fire Control- Counter Air SE&I			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3159: Naval Integrated Fire Control-Counter Air SE&I	328.046	34.240	36.181	29.820	-	29.820	32.170	34.851	37.858	31.422	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

3159 Naval Integrated Fire Control (NIFC) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to extend the Naval Integrated Air and Missile Defense battlespace out to the maximum kinematic range of our weapons for the air, surface, and strike warfare missions. This includes targets beyond the detection range of the shooter. The NIFC project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates and performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize capabilities. As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From The Sea (FTS) family of kill chains which includes an elevated sensor, platform, fire control system and missile, along with introducing other networks and sensors coordinating with other DoD activities as appropriate. Along with executing NIFC Inc 2 developmental test & fielding, the SEIT supports the design of the current kill chain and system configuration and architectures. Future NIFC efforts (e.g. NIFC Inc 3) includes SEIT activities across a broad range of systems and architectures.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Integration and Test (I&T) Integrated Product Team (IPT)	14.564	16.125	13.885	0.000	13.885
Articles:	-	-	-	-	-
Description: The Integration and Test (I&T) Integrated Product Team (IPT) develops and executes the test plan to assess the FTS operational capability, performs risk reduction testing leveraging various component system tests. Test data will be used over time to verify, validate, and accredit the FTS simulation federation.					
FY 2023 Plans: - Execute Test Events in FY23: Land based Capability Demonstrations (CDs) (Non-Fire) planned for Feb 2023 with leading edge kill chains. Second CD planned for 3QFY23/4QFY23. Conduct systems engineering and integration efforts for NIFC Inc 3 capability demonstrations/At Sea Test event for 4QFY24. -Participating in Integrated Battle Problem (IBP) in 1QFY23.					
FY 2024 Base Plans: Execute Test Events in FY24: Land based capability demonstrations (Non-Fire), and Live Fire events. At Sea event planned for 4QFY24.					
FY 2024 OCO Plans:					

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Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3159 / Naval Integrated Fire Control- Counter Air SE&I			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: Decrease is due to creation of Project 2757 which moves funding to begin funding of LR-NIFC. Project 3159 will decrease testing events to accommodate reduction in budget.					
Title: Engineering Management And System Definition					
Articles:					
Description: Engineering management and system definition including the development of the Systems Performance Document (SPD), System of Systems (SoS) functional allocations, requirements, traceability, SoS trades studies, SoS information exchange requirements, interface specifications, and sensor network capability analysis. Provides for complete FTS kill chain performance analysis and interface verification through development of a federation of simulations provided directly from the Programs of Record (PORs). Programs of Record include an elevated sensor, fire control system, platform and missile, as well as an expanding set of sensors and networks. NIFC-FTS Increment 3 adds multiple new sensors, networks, and weapons to the kill chain including Tactical Air Support (TACAIR) integration, (Electronic Warfare), and Battle management development and improvement.					
Federated SoS simulations support architecture development, scenario development, predictive analysis for testing, and define capabilities and limitations of FTS kill chain performance analysis and interface verification through development of a federation of simulations provided directly from the FTS PORs and future enhancements.					
Federated SoS simulations support architecture development, scenario development, predictive analysis for testing, and define capabilities and limitations of FTS kill chain for deployment.					
FY 2023 Plans: - System of systems (SOS) activities for Inc 3 advanced kill chains developing system documents as described above for increased sensor and network participation to meet fleet needs in support of warfighting in complex Naval environments - Continue Modeling and Simulations (M&S) for evaluation of advanced concepts utilizing other networks and sensors.					
FY 2024 Base Plans:					
	19.676	20.056	15.935	0.000	15.935
	-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>System of systems (SOS) activities for Inc 3 advanced kill chains developing system documents as described above for increased sensor and network participation to meet fleet needs in support of warfighting in complex Naval environments. Continue Modeling and Simulations (M&S) for evaluation of advanced concepts utilizing other networks and sensors. System Engineering, Performance Modeling, Analysis, and assessment of Integrated Fire Control (IFC) architectures to support decisions for investment and prioritization in future NIFC kill chain architectures. Develop models, simulations, and tools, to analyze, assess, and recommend potential future NIFC architectures.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease is due to creation of Project 2757 which moves funding to begin funding of LR-NIFC. Project 3159 will decrease testing events to accommodate reduction in budget.</p>					
Accomplishments/Planned Programs Subtotals	34.240	36.181	29.820	0.000	29.820

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0604366N: Standard Missile SM-6	3.031	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Remarks											

D. Acquisition Strategy
Not Applicable

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3159 / Naval Integrated Fire Control- Counter Air SE&I
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Systems Engineering	Various	Various : Various	60.304	3.947	Dec 2021	3.000	Dec 2022	1.800	Dec 2023	-		1.800	0.000	69.051	-
Systems Engineering	C/CPFF	JHU/APL : Laurel, MD	8.994	2.704	Oct 2021	1.500	Dec 2022	0.800	Dec 2023	-		0.800	0.000	13.998	-
Systems Engineering	C/CPFF	NGIS : Melbourne, FL	8.653	0.000		0.000		0.000		-		0.000	0.000	8.653	-
Systems Engineering	C/CPFF	LM MS2 : Moorestown, NJ	68.311	4.852	Oct 2021	5.170	Nov 2022	4.000	Nov 2023	-		4.000	0.000	82.333	-
Systems Engineering	C/CPFF	Raytheon Co. : St. Petersburg, FL	16.511	0.370	Oct 2021	0.560	Nov 2022	0.300	Nov 2023	-		0.300	0.000	17.741	-
Systems Engineering	WR	NSWC CRANE : Crane, IN	2.748	2.003	Dec 2021	3.285	Dec 2022	3.175	Dec 2023	-		3.175	0.000	11.211	-
Systems Engineering	WR	NAWC CHINA LAKE : China Lake, CA	3.323	0.000		0.000		0.000		-		0.000	0.000	3.323	-
Systems Engineering	WR	COTF : Norfolk, VA	0.785	0.000		0.000		0.000		-		0.000	0.000	0.785	-
Systems Engineering	WR	NAWC Pax River : Pax River, MD	3.295	0.100	Oct 2021	1.400	Oct 2022	1.000	Oct 2023	-		1.000	0.000	5.795	-
Systems Engineering	WR	NSWC DAHLGREN : Dahlgren, VA	4.210	3.262	Oct 2021	3.041	Oct 2022	3.600	Oct 2023	-		3.600	0.000	14.113	-
Systems Engineering	C/CPFF	Raytheon Co. : Tucson, AZ	1.054	1.000	Oct 2021	0.545	Dec 2022	0.000		-		0.000	0.000	2.599	-
Systems Engineering	WR	NRL : Washingotn, DC	0.000	0.000		0.065	Nov 2022	0.060	Nov 2023	-		0.060	0.000	0.125	-
Subtotal			178.188	18.238		18.566		14.735		-		14.735	0.000	229.727	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	C/CPFF	Raytheon : St. Petersburg, FL	8.395	0.250	Oct 2021	0.195	Oct 2022	0.300	Nov 2023	-		0.300	0.000	9.140	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 5				PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E				3159 / Naval Integrated Fire Control-Counter Air SE&I							
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	COTF : Norfolk, VA	0.013	0.000		0.000		0.000		-		0.000	0.000	0.013	-
Developmental Test & Evaluation (DT&E)	C/BA	Wallops Island : Wallops Island, VA	0.260	0.000	Oct 2021	0.013	Oct 2022	0.000		-		0.000	0.000	0.273	-
Developmental Test & Evaluation (DT&E)	WR	NAWC AD : Pax River, MD	0.733	0.000		0.000		0.000		-		0.000	0.000	0.733	-
Developmental Test & Evaluation (DT&E)	WR	NAWC CHINA LAKE : China Lake, CA	1.460	0.000		0.200	Oct 2022	0.435	Oct 2023	-		0.435	0.000	2.095	-
Developmental Test & Evaluation (DT&E)	WR	NAWC Pax River : Pax River, MD	1.245	0.080	Dec 2021	0.000		0.000		-		0.000	0.000	1.325	-
Developmental Test & Evaluation (DT&E)	C/BA	NSWC/DAHLGREN : DAHLGREN, VA	1.122	0.460	Oct 2021	0.600	Oct 2022	0.300	Oct 2023	-		0.300	0.000	2.482	-
Developmental Test & Evaluation (DT&E)	C/CPFF	Lockheed Martin - Moorestown, NJ : Moorestown, NJ	32.386	3.385	Oct 2021	2.045	Oct 2022	2.000	Nov 2023	-		2.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	PT MUGU : PT Mugu, CA	11.466	0.000	Oct 2021	0.300	Oct 2022	0.400	Oct 2023	-		0.400	0.000	12.166	-
Developmental Test & Evaluation (DT&E)	Various	Various : Various	54.535	1.946	Oct 2021	3.570	Oct 2022	1.700	Oct 2023	-		1.700	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	MIPR	Dept of Interior : Boise, ID	4.048	0.000	Dec 2021	0.000	Dec 2022	0.000		-		0.000	0.000	4.048	-
Developmental Test & Evaluation (DT&E)	WR	NSWC/PHD : Port Hueneme, CA	8.619	3.475	Oct 2021	5.956	Oct 2022	4.800	Oct 2023	-		4.800	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NIWC : San Diego, CA	0.066	0.000		0.000		0.000		-		0.000	0.000	0.066	-
Developmental Test & Evaluation (DT&E)	C/CPFF	JHU/APL : Laurel, MD	0.556	0.556	Oct 2021	0.300	Oct 2022	0.500	Oct 2023	-		0.500	0.000	1.912	-
Developmental Test & Evaluation (DT&E)	WR	NSWC CRANE : Crane, IN	0.600	0.600	Oct 2021	0.980	Oct 2022	0.300	Dec 2023	-		0.300	0.000	2.480	-
Developmental Test & Evaluation (DT&E)	WR	NIWC San Diego : San Diego, CA	0.000	0.292	Dec 2021	0.100	Dec 2022	0.300	Dec 2023	-		0.300	0.000	0.692	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3159 / Naval Integrated Fire Control- Counter Air SE&I
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Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	C/CPFF	Northrop Grumman : Melbourne, FL	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Developmental Test & Evaluation (DT&E)	WR	PMRF : Barking Sands, HI	0.000	1.948	Apr 2022	0.300	Apr 2023	1.800	Apr 2024	-		1.800	0.000	4.048	-
Developmental Test & Evaluation (DT&E)	C/CPFF	Raytheon : Tuscon, AZ	0.000	0.000		0.455	Dec 2022	0.750	Dec 2023	-		0.750	0.000	1.205	-
Developmental Test & Evaluation (DT&E)	WR	NSWC CORONA : Corona, CA	0.000	0.000		0.208	Oct 2022	0.300	Oct 2023	-		0.300	0.000	0.508	-
Developmental Test & Evaluation (DT&E)	C/CPFF	Innovative Defense Tech (IDT) : Arlington, VA	0.000	1.118	Jul 2022	0.500	Jul 2023	0.000		-		0.000	0.000	1.618	-
Subtotal			125.504	14.110		15.722		13.885		-		13.885	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Planning and Management	WR	NAWC China Lake : China Lake, CA	0.201	0.000		0.000		0.000		-		0.000	0.000	0.201	-
Project Planning and Management	WR	NAWC Pax River : Pax River, MD	0.260	0.000		0.000		0.000		-		0.000	0.000	0.260	-
Project Planning and Management	C/CPFF	Various : Various	23.893	1.892	Oct 2021	1.893	Oct 2022	1.200	Oct 2023	-		1.200	Continuing	Continuing	Continuing
Subtotal			24.354	1.892		1.893		1.200		-		1.200	Continuing	Continuing	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		328.046	34.240	36.181	29.820	-	29.820	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3159 / Naval Integrated Fire Control- Counter Air SE&I

NIFC FTS Planning Schedule



Capability	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28
Capability	★ INC 2 IOC			INC 3 IOC	★		
NIFC Project Activity	C2P Refresh						
WSMR Desert Ship (DS) Upgrade and Maintenance	MAINTAIN CONFIGs & IA						
NIFC Capability Demonstrations 2 LFTs & 1 Capability Demo (CD), Per Year; CD = Non-LFT (INC 2/2+/3)	LFT 10 At Sea (AS) 8 @PMRF	CDs 2 LFT CD 9/10 @ DS	CDs 3 AS 10	CD 1 At Sea	CD 1 At Sea	CD 1 At Sea	CD 1 At Sea
RELATED PROGRAMS	Sensor Updates Delta System/Software Configuration (DSSC)						
	DSSC-4		DSSC-5				
	CEC AN/USG-3B E-2D CEC AN/USG-2B AWS CEC Updates			BLK 2 IOC		BLK 2 FOC	
	AEGIS Weapon System ACB-16			Aegis CP24 Combat System Cert TACAIR NOT FUNDED		TACAIR Phase 2.3.7 Cert	
	SM-6 Blk IA			TACAIR Phase 2.1		TACAIR Phase 2.2	
Joint & Fleet Events	10 PC 22 @DS Integrated Battle Problem (IBP) 23 CD						

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3159 / Naval Integrated Fire Control- Counter Air SE&I

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3159				
NIFC PROJECT ACTIVITY: CAPABILITY: INC 2 IOC	2	2022	2	2022
NIFC PROJECT ACTIVITY: CAPABILITY: INC 3 IOC	2	2026	2	2026
White Sands Missile Range (WSMR): White Sands Missile Range (WSMR) Desert Ship Upgrade and Maintenance Development: C2P Refresh 22	2	2022	2	2022
White Sands Missile Range (WSMR): White Sands Missile Range (WSMR) Desert Ship Upgrade and Maintenance Development: Install of Virtualized AEGIS	4	2024	4	2024
White Sands Missile Range (WSMR): White Sands Missile Range (WSMR) Desert Ship Upgrade and Maintenance Development: Maintain CONFIG & IA	1	2022	2	2025
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA Live Fire Tests: LFT 10/22	1	2022	1	2022
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA Live Fire Tests: At Sea 8 4/22	3	2022	3	2022
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 Capability Demo 2/23	2	2023	2	2023
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 Capability Demo 8/23	4	2023	4	2023
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA Live Fire Tests: 3/24	2	2024	2	2024
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA At Sea Capability Demo 9/24	4	2024	4	2024
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA LFT Capability Demo 1/25	2	2025	2	2025
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA Live Fire Tests: At Sea 5/25	3	2025	3	2025
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA Live Fire Test: LFT 1/26	2	2026	2	2026

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy			Date: March 2023	
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3159 / Naval Integrated Fire Control- Counter Air SE&I		
	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA Live Fire Tests: At Sea 5/26	3	2026	3	2026
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA LFT Capability Demo: 1/27	2	2027	2	2027
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA Live Fire Tests: At Sea 5/27	3	2027	3	2027
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA LFT Capability Demo: 1/28	2	2028	2	2028
ACB 16 With SM-6Blk 1A Live Fire Tests: ACB-16 with SM-6 Blk IA LFT Capability Demo: 5/28	3	2028	3	2028
Elevated Sensor Updates Delta System/Software Configuration (DSSC): E-2D Updates Delta System/Software Configuration (DSSC) 4	3	2022	3	2022
Elevated Sensor Updates Delta System/Software Configuration (DSSC): E-2D Updates Delta System/Software Configuration (DSSC): DSSC-5 On Going	3	2023	3	2023
SM-6 Blk 1 & SM-6 Blk 1A: CEC Updates On-Going Block 2 IOC	4	2024	4	2024
SM-6 Blk 1 & SM-6 Blk 1A: CEC Updates: Block 2 FOC	4	2026	4	2026
SM-6 Blk 1 & SM-6 Blk 1A: AEGIS Weapon System ACB-16: TACAIR Phase II Cert (3 phases)	4	2026	4	2026
SM-6 Blk 1 & SM-6 Blk 1A: AEGIS Weapon System ACB-16: CSL Combat System Load Cert	4	2024	4	2024
SM-6 Blk 1 & SM-6 Blk 1A: SM-6 Blk IA: FOC	3	2023	3	2023
Joint & Fleet Events: Fleet Event: Integrated Battle Problem (IBP)	1	2023	1	2023
Joint & Fleet Events: Joint Event: Army Project Convergence (PC) 22	1	2023	1	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E				Project (Number/Name) 3242 / NIFC-CA Supported by Airborne Platforms			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3242: NIFC-CA Supported by Airborne Platforms	14.553	8.595	9.711	11.625	-	11.625	12.656	12.837	13.280	13.475	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Naval Integrated Fire Control (NIFC) From the Air (FTA) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to integrate NIFC FTA capabilities within "Pillar Programs" (F/A-18 & EA-18G, E-2D, F-35, Link-16 and Tactical Targeting Network Technology Data Links, and all USN air launched Air-to-Air and Air-to-Surface weapons). Based on the advancing threat, there remains an imperative to improve lethality, survivability and interoperability by extending the battlespace out to the maximum kinematic range of our weapons for the air, surface, and strike warfare missions. The NIFC FTA project leverages capabilities inherent in existing systems, optimizes current and emerging technologies in platform system upgrades, and integrates them together to form interoperable System of Systems (SoS) to maximize offensive and defensive FTA integrated capabilities. As directed from OPNAV, the project is focused on development of Air Warfare, Surface Warfare, and Strike Warfare FTA effects chains. This PU will support efforts that include decomposing SoS requirements into Mission Technical Baselines (MTBs) and Integrated Capability Technical Baselines (ICTBs) for requirement allocation to Pillar Programs. Additionally, this PU will support NIFC pillar program coordination to provide performance predictions, performance assessments, and SoS risk reduction activities through Live, Virtual, and Constructive (LVC) events, SoS exercises, and development of Requirements Test and Verification Matrices (RTVMs) to support Developmental and Operational Test for the individual platforms. In lieu of a traditional Test and Evaluation Master Plan (TEMP), NIFC FTA test strategies will be developed to identify resources required to evaluate NIFC FTA capabilities, and describe how NIFC FTA capabilities will be evaluated prior to fleet delivery.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: NIFC From the Air (FTA) Capabilities Effectiveness and Integration	8.595	9.711	11.625	0.000	11.625
Articles:	-	-	-	-	-
Description: Develops and executes multi-platform cross-domain offensive and defensive kinematic and non-kinematic effects chains.					
FY 2023 Plans: Continue NIFC FTA System of Systems (SoS) verification and validation testing of F/A-18 H16, F-35, and E-2D DSSC 4 / 5 with increased capabilities of USN air launched Air-to-Air and Air-to-Surface weapons, integration of Tactical Targeting Network Technology (TTNT), and enhancements to Link-16. Evaluate and assess integrated fires interoperability and performance across air platforms and weapons by the utilization of federated labs. These labs will utilize a combination of Live Virtual Constructive (LVC) capabilities to identify issues, and provide					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3242 / NIFC-CA Supported by Airborne Platforms

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>recommendations for corrections. Development of mission Requirements Test and Verification Matrices (RTVMs) to provide definition to Developmental Test and Operational Test within the individual platforms. Development of Integrated Technical Capability Baselines (ICTBs) and Design Reference Missions (DRMs) to inform architecture development and system definition of the F/A-18 H18/H20, E-2D DSSC 6/7, and continued F-35 improvements. Execute performance assessments, interoperability risk reduction for advanced Integrated Fire Control (IFC), and employment recommendations across the NIFC pillar programs to maximize effectiveness when introduced to the Fleet.</p> <p>FY 2024 Base Plans: Continue NIFC FTA System of Systems (SoS) verification and validation testing of F/A-18 H16, F-35, and E-2D DSSC 4 / 5 with increased capabilities of USN air launched Air-to-Air and Air-to-Surface weapons, integration of Tactical Targeting Network Technology (TTNT), and enhancements to Link-16. Evaluate and assess integrated fires interoperability and performance across air platforms and weapons by the utilization of federated labs. These labs will utilize a combination of Live Virtual Constructive (LVC) capabilities to identify issues, and provide recommendations for corrections. Development of mission Requirements Test and Verification Matrices (RTVMs) to provide definition to Developmental Test and Operational Test within the individual platforms. Development of Integrated Technical Capability Baselines (ICTBs) and Design Reference Missions (DRMs) to inform architecture development and system definition of the F/A-18 H18/H20, E-2D DSSC 6/7, and continued F-35 improvements. Execute performance assessments, interoperability risk reduction for advanced Integrated Fire Control (IFC), and employment recommendations across the NIFC pillar programs to maximize effectiveness when introduced to the Fleet.</p> <p>Beginning in FY24, funds issued for a shift to digital engineering at the Systems of Systems (SoS) level, enabling mission level SoS requirements to be delivered as digital architecture models that can be integrated with pillar platform digital models in a single environment. This will provide the delivery of a digital engineering analysis environment to support faster development cycle and maintain program alignment for SoS capabilities from gap identification, through POM, development test and fielding. Provide mission level, SoS support of digital acquisition programs and expand Modeling Simulation & Analysis (MS&A) capabilities to account for critical GPC capabilities in 6th Gen, Electronic Warfare, Beyond Line of Sight, data links and networks.</p> <p>FY 2024 OCO Plans:</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3242 / NIFC-CA Supported by Airborne Platforms

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A					
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Increase is to fund a shift to digital engineering at the Systems of Systems (SoS) level, enabling mission level SoS requirements to be delivered as digital architecture models that can be integrated with pillar platform digital models in a single environment. This will provide the delivery of a digital engineering analysis environment to support faster development cycle and maintain program alignment for SoS capabilities from gap identification, through POM, development test and fielding. Provide mission level, SoS support of digital acquisition programs and expand Modeling Simulation & Analysis (MS&A) capabilities to account for critical GPC capabilities in 6th Gen, Electronic Warfare, Beyond Line of Sight, data links and networks.					
Accomplishments/Planned Programs Subtotals	8.595	9.711	11.625	0.000	11.625

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not Applicable.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 5				PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E				3242 / NIFC-CA Supported by Airborne Platforms							
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SYSTEM ENGINEERING	WR	NAWC AD : PAX RIVER, MD	4.065	1.885	Oct 2021	1.912	Oct 2022	3.570	Oct 2023	-		3.570	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	WR	NAWC CHINA LAKE : CHINA LAKE, CA	2.934	1.539	Oct 2021	1.700	Oct 2022	2.720	Oct 2023	-		2.720	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	C/CPFF	NSMA : WASHINGTO, DC	2.768	0.900	Nov 2021	0.800	Nov 2022	0.600	Oct 2023	-		0.600	0.000	5.068	5.068
Subtotal			9.767	4.324		4.412		6.890		-		6.890	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NAWC AD : PAX RIVER, MD	1.305	1.105	Oct 2021	1.007	Oct 2022	2.434	Oct 2023	-		2.434	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NAWC CHINA LAKE : CHINA LAKE, CA	1.371	0.697	Oct 2021	0.701	Oct 2022	0.422	Oct 2023	-		0.422	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/CPFF	NSMA : WASHINGTON, DC	1.285	1.882	Dec 2021	2.911	Dec 2022	1.430	Oct 2023	-		1.430	0.000	7.508	7.518
Subtotal			3.961	3.684		4.619		4.286		-		4.286	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PROJECT PLANNING AND MANAGEMENT	WR	NAWC AD : PAX RIVER, MD	0.550	0.414	Oct 2021	0.420	Oct 2022	0.409	Oct 2023	-		0.409	Continuing	Continuing	Continuing
PROJECT PLANNING AND MANAGEMENT	WR	NAWC CHINA LAKE : CHINA LAKE, CA	0.249	0.148	Oct 2021	0.250	Oct 2022	0.000	Oct 2023	-		0.000	Continuing	Continuing	Continuing

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3242 / NIFC-CA Supported by Airborne Platforms
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Proj 3242	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
NAVAIR SoS Exercises			▲				▲				▲				▲				▲				▲				▲				▲	
FTA Federation LVC Event 13-16	▲	▲	▲																													
FTA Federation LVC Event 17-20			▲		▲	▲	▲																									
FTA Federation LVC Event 21-24									▲	▲	▲																					
FTA Federation LVC Event 25-29													▲	▲	▲																	
FTA Federation LVC Event 29-32																	▲	▲	▲													
FTA Federation LVC Event 33-36																					▲	▲	▲									
FTA Federation LVC Event 37-40																									▲	▲	▲	▲				
F/A-18 SW Updates																▲								▲				▲				▲
E-2D SW Updates							▲								▲								▲									
F-35 SW Updates	▲						▲	▲	▲				▲				▲				▲				▲							
SoS Digital Engineering Study												▲				▲				▲				▲				▲				▲

2024PB - 0604378N - 3242

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3242 / NIFC-CA Supported by Airborne Platforms

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3242				
NAVAIR SoS Exercises: NAVAIR SoS Exercise 3/22	3	2022	3	2022
NAVAIR SoS Exercises: NAVAIR SoS Exercise 3/23	3	2023	3	2023
NAVAIR SoS Exercises: NAVAIR SoS Exercise 3/24	3	2024	3	2024
NAVAIR SoS Exercises: NAVAIR SoS Exercise 3/25	3	2025	3	2025
NAVAIR SoS Exercises: NAVAIR SoS Exercise 3/26	3	2026	3	2026
NAVAIR SoS Exercises: NAVAIR SoS Exercise 3/27	3	2027	3	2027
NAVAIR SoS Exercises: NAVAIR SoS Exercise 3/28	3	2028	3	2028
FTA Federation LVC Event 13-16: FTA Federation LVC Event 13	2	2022	2	2022
FTA Federation LVC Event 13-16: FTA Federation LVC Event 14	3	2022	3	2022
FTA Federation LVC Event 13-16: FTA Federation LVC Event 15	4	2022	4	2022
FTA Federation LVC Event 13-16: FTA Federation LVC Event 16	4	2022	4	2022
FTA Federation LVC Event 17-20: FTA Federation LVC Event 17	2	2023	2	2023
FTA Federation LVC Event 17-20: FTA Federation LVC Event 18	3	2023	3	2023
FTA Federation LVC Event 17-20: FTA Federation LVC Event 19	4	2023	4	2023
FTA Federation LVC Event 17-20: FTA Federation LVC Event 20	4	2023	4	2023
FTA Federation LVC Event 21-24: FTA Federation LVC Event 21	2	2024	2	2024
FTA Federation LVC Event 21-24: FTA Federation LVC Event 22	3	2024	3	2024
FTA Federation LVC Event 21-24: FTA Federation LVC Event 23	4	2024	4	2024
FTA Federation LVC Event 21-24: FTA Federation LVC Event 24	4	2024	4	2024
FTA Federation LVC Event 25-29: FTA Federation LVC Event 25	2	2025	2	2025
FTA Federation LVC Event 25-29: FTA Federation LVC Event 26	3	2025	3	2025

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3242 / NIFC-CA Supported by Airborne Platforms
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
FTA Federation LVC Event 25-29: FTA Federation LVC Event 27	4	2025	4	2025
FTA Federation LVC Event 25-29: FTA Federation LVC Event 28	4	2025	4	2025
FTA Federation LVC Event 29-32: FTA Federation LVC Event 29	2	2026	2	2026
FTA Federation LVC Event 29-32: FTA Federation LVC Event 30	3	2026	3	2026
FTA Federation LVC Event 29-32: FTA Federation LVC Event 31	4	2026	4	2026
FTA Federation LVC Event 29-32: FTA Federation LVC Event 32	4	2026	4	2026
FTA Federation LVC Event 33-36: FTA Federation LVC Event 33	2	2027	2	2027
FTA Federation LVC Event 33-36: FTA Federation LVC Event 34	3	2027	3	2027
FTA Federation LVC Event 33-36: FTA Federation LVC Event 35	4	2027	4	2027
FTA Federation LVC Event 33-36: FTA Federation LVC Event 36	4	2027	4	2027
FTA Federation LVC Event 37-40: FTA Federation LVC Event 37	2	2028	2	2028
FTA Federation LVC Event 37-40: FTA Federation LVC Event 38	3	2028	3	2028
FTA Federation LVC Event 37-40: FTA Federation LVC Event 39	4	2028	4	2028
FTA Federation LVC Event 37-40: FTA Federation LVC Event 40	4	2028	4	2028
F/A-18 SW Updates: F/A-18 SW Updates H18	4	2028	4	2028
F/A-18 SW Updates: F/A-18 SW Updates H20	4	2025	4	2025
F/A-18 SW Updates: F/A-18 SW Updates H22	4	2027	4	2027
E-2D SW Updates: E-2D SW Updates DSSC-4	3	2023	3	2023
E-2D SW Updates: E-2D SW Updates DSSC-5	3	2025	3	2025
E-2D SW Updates: E-2D SW Updates DSSC-6	3	2027	3	2027
F-35 SW Updates: F-35 SW Updates 30P07	2	2022	2	2022
F-35 SW Updates: F-35 SW Updates 40P01	3	2023	3	2023
F-35 SW Updates: F-35 SW Updates 30P08	4	2023	4	2023
F-35 SW Updates: F-35 SW Updates 40P02	2	2024	2	2024
F-35 SW Updates: F-35 SW Updates 41P01	2	2025	2	2025

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 3242 / NIFC-CA Supported by Airborne Platforms
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
F-35 SW Updates: F-35 SW Updates 42P01	2	2026	2	2026
F-35 SW Updates: F-35 SW Updates 42P02	2	2027	2	2027
F-35 SW Updates: F-35 SW Updates 43P01	2	2028	2	2028
SoS Digital Engineering Study: SoS Digital Engineering Study 4/24	4	2024	4	2024
SoS Digital Engineering Study: SoS Digital Engineering Study 4/25	4	2025	4	2025
SoS Digital Engineering Study: SoS Digital Engineering Study 4/26	4	2026	4	2026
SoS Digital Engineering Study: SoS Digital Engineering Study 4/27	4	2027	4	2027
SoS Digital Engineering Study: SoS Digital Engineering Study 4/28	4	2028	4	2028

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 9999 / Congressional Adds
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	0.000	6.275	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.275
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Congressional Interest Items not included in other Projects.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023
Congressional Add: Stratospheric balloons	6.275	0.000
FY 2022 Accomplishments: FY22 funding will be utilized by the Naval Air Systems Command (NAVAIR), in operational partnership with the U.S. Pacific Fleet, for technology maturation and risk reduction of expanded stratospheric concepts involving the Thunderhead Balloon System platform, additional payloads, and associated interfaces. These efforts are designed with the goal of maturing concepts to expand stratospheric capability as the Navy enters into a Program of Record (PoR) in Fiscal Year 2023.		
FY 2023 Plans: N/A		
Congressional Adds Subtotals	6.275	0.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 9999 / Congressional Adds
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
TBD	C/BA	TBD : Not Specified	0.000	6.275	Jun 2022	0.000		0.000		-		0.000	0.000	6.275	-
Subtotal			0.000	6.275		0.000		0.000		-		0.000	0.000	6.275	N/A

Remarks
TBD

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	6.275	0.000	0.000	-	0.000	0.000	6.275	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 9999 / Congressional Adds
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Proj 9999	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Stratospheric Balloons																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604378N / Nav Integrated Fire Control - Counter Air Sys E	Project (Number/Name) 9999 / Congressional Adds

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 9999				
Stratospheric Balloons: Stratospheric Balloons	3	2022	4	2023